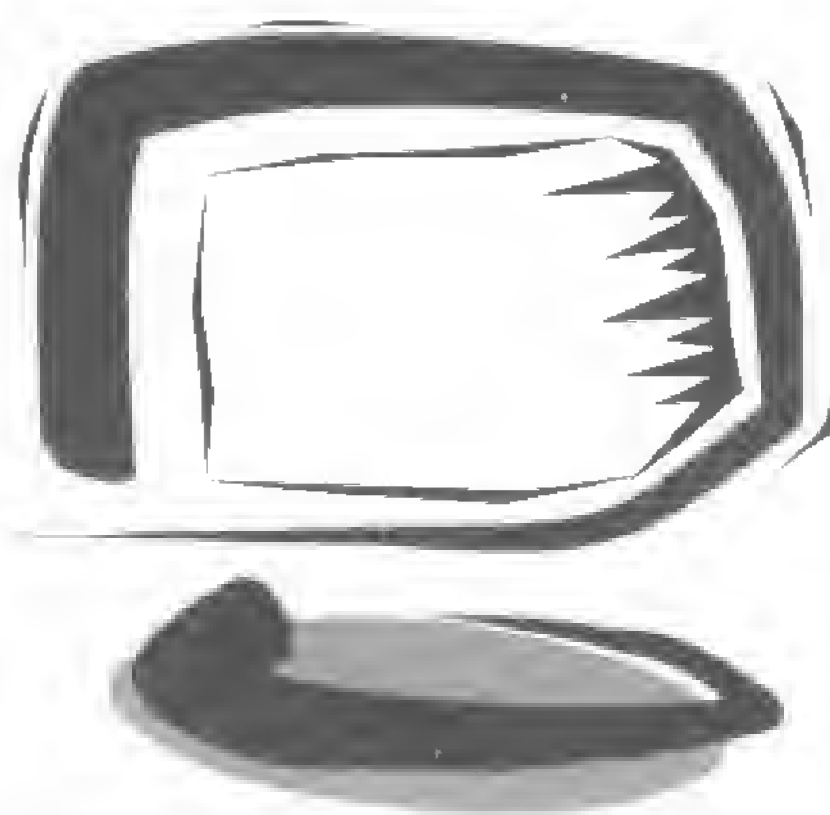## F996 SERIES

Operation Manual

19"

High Resolution Color Monitor

READ THIS MANUAL BEFORE OPERATION

Federal communications commission (FCC) Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

Warning:

It is essential that only the supplied power cord be used and use shielded cables to connect I/O devices to this equipment.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

INTRODUCTION

Our monitors are high resolution color monitors for use with
IBM PC/XT/AT and PS/2 computers or compatibles with
analog RGB output.
The monitors support timings of graphics adapters including:
VGA, super VGA, 8514/A, XGA, 1024 x 768, 1280 x 1024 and 1600 x 1200.

FEATURES

- Automatically scan horizontal and vertical frequencies.

- Analog input signal provides the capability of an unlimited display colors.

- Auto sizing and auto centering between modes of graphics standards.

- Horizontal size/center, vertical size/center, pincushion, trapezoid and color temperature are adjustable to adapt to a variety of graphics cards.

- Fine phosphor pitch and non-glare CRT provide greater image clarity.
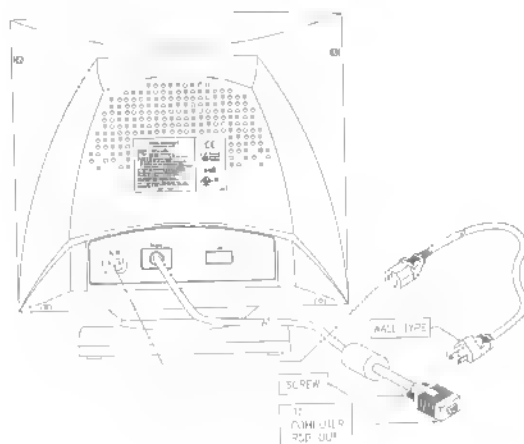
USING THE RIGHT POWER CORD

For units used at 120V:Use a UL Listed cord set consisting of a minimum NO.18 AWG, Type SVT or SJT, rated 6A minimum 125V, three-conductor cord a maximum of 15 ft in length and a parallel blade, grounding type attachment plug.

For units used at 230V (domestic use): Use a UL Listed cord set consisting of a minimum No. 18 AWG, Type SVT or SJT, rated 3A minimum 250V, three conductor cord a maximum of 15 ft in length and a tandem blade, grounding type attachment plug.

For units used at 230V (outside of U.S.): Use a cord set consisting of a minimum No. 18 AWG cord and grounding type attachment plug rated 3A minimum 250 V. The cord set should have the appropriate safety approvals for the country in which the equipment will be installed and marked HAR.

CONTROLS AND OPERATION
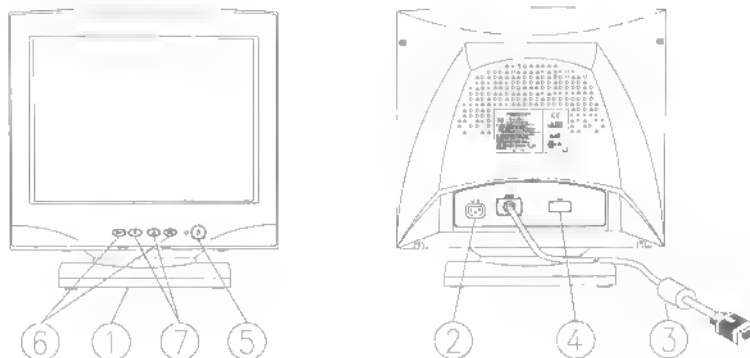
1. TILT/SWIVEL BASE

Turn the monitor for comfortable viewing angle within 180 degrees horizontally and 20 degrees vertically. (Please refer to instructions on bottom of rear cover for installation.)

2. AC INPUT CONNECTOR (Appliance coupler)

Connect to AC outlet with supplied power cord.

3. SIGNAL INPUT CONNECTOR (15-pin mini D-SUB)

Connect to the display adapter output of a computer having analog video output. (Please see installation instructions.)

4. USB CONNECTOR (OPTIONAL)

Connect to USB Function board with connector wire.

5. POWER SWITCH AND INDICATOR

Press this switch to turn on the monitor and the indicator will light up. To turn off the monitor, press it again.

6. SELECT BUTTON

Push "Menu" button to display OSD menu and select Main function then push "ENTER" button to select sub-function for adjust.

7. ADJUST BUTTON

Push button to obtain preferred picture performance or to execute $\nabla/\triangle$ a function.

INSTALLATION INSTRUCTIONS

CAUTION:

Be sure to turn off the AC Power to the monitor before making connections

1. Assemble the tilt/swivel base as shown below.
2. Connect the power cord as shown on the page 5.
3. Connect the end of the signal cable to the display connector of the computer and tighten the screws as shown on the page 5.
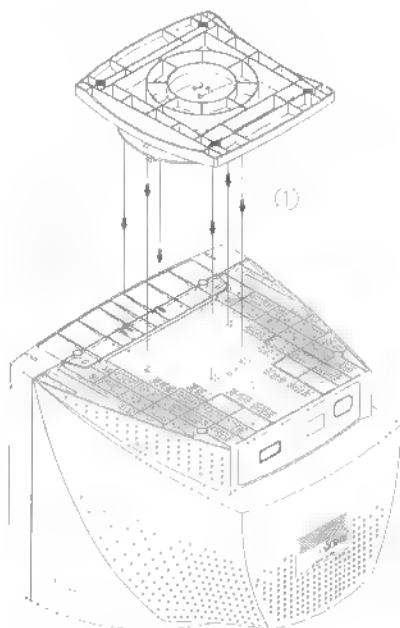
IMPORTANT SAFETY INSTRUCTIONS

I.   SEE INSTALLATION INSTRUCTIONS BEFORE CONNECTING
     TO THE SUPPLY.

II. THE APPLIANCE COUPLER IS CONSIDERED AS A   DISCON-
     NECT DEVICE. IT SHOULD BE CONNECTED AS CLOSE AS
     POSSIBLE TO THE INCOMING SUPPLY.

III. TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE
     THE UNIT TO RAIN OR MOISTURE.

IV. REFRAIN FROM OPENING THE CABINET AS THERE ARE
     HIGH VOLTAGE COMPONENTS INSIDE. REFER SERVICING TO
     QUALIFIED SERVICE PERSONNEL.

V.   IF USED IN INDUSTRIAL ENVIRONMENTS, SPECIAL PRECAU-
     TIONS MAY NEED TO BE TAKEN TO LIMIT TRANSIENT
     VOLTAGES.

OSD FUNCTION

1. To enter OSD . Push " MENU " button.

2. To exit OSD : Push " MENU " button , press it again. or
                 Select " EXIT " and push " ENTER " button

OSD MAIN MENU

- CONTRAST
- BRIGHTNESS
- H-POSITION
- V-POSITION
- H-SIZE
- V-SIZE
- PINCUSHION
- PIN BALANCE
- TRAPEZOID
- PARALLEL
- TILT
- TOP CORNER
- BOTTOM CORNER
- TOP PHASE HOOKING
- BOTTOM PHASE HOOKING
- COLOR
  - 9300K / 6500K / 5000K
  - USER (R, G, B)
- H-MOIRE
- V-MOIRE
- V-LINEARITY
- V-S LINEARITY
- DEGAUSS
- OSD H-POSITION
- OSD V-POSITION
- LANGUAGE (ENGLISH / FRENCH / GERMAN / SPANISH / ITALIAN)
- MEMORY RECALL
- EXIT

SPECIFICATIONS

MODEL			F996 BYW
CRT	SIZE		19 INCH DIAGONAL (18" VIEWABLE)
	DEFLECTION ANGLE		90 DEGREES
	DOT PITCH		0.25mm
	SCREEN		DOT TYPE NON-GLARE
GRAPHICS STANDARDS COMPATIBILITY			NON-INTERLACED 1600 X 1200, 1280 X 1024, 1024 X 768, XGA, SUPER VGA, VGA.
RESOLUTION(MAX)			1600X1200 NON-INTERLACED
VIDEO BANDWIDTH (DOT RATE)			150MHz
SYNCHRONI -ZATION	HORIZONTAL		30~95KHz
	VERTICAL		50~180Hz
INPUT SIGNAL	VIDEO		RGB ANALOG 0.7VP-P/75 OHMS POSITIVE
	SYNC		TTL SEPARATE/COMPOSITE (+/-)
DISPLAY COLORS			UNLIMITED
DISPLAY AREA (H x V)			(RECOMMENDED) THE DISPLAY AREA DEPENDS ON ACTUAL SIGNAL TIMINGS
POWER SOURCE			90-264 VAC
POWER CONSUMPTION			130W (MAX)
INPUT CONNECTOR			15 PIN MINI D-SUB
DIMENSION			460mm (D) x 448mm (W) x 465mm(H) (USE STAND)
WEIGHT			N.W. : 20.0KG (44.1LBS) , G.W. : 22.8KG (50.3LBS)
USER CONTROLS			CONTRAST, BRIGHTNESS, H-POSITION, V-POSITION, H-SIZE, V-SIZE, PINCUSHION, PIN-BALANCE, TRAPEZOID, PARALLEL, TILT, TOP CORNER,BOTTOM CORNER, TOP PHASE HOOKING, BOTTOM PHASE HOOKING, H-MOIRE, V-MOIRE, DEGAUSS, OSD H-POSITION, OSD V-POSITION, COLOR, V-LINEARITY, V-S LINEARITY, LANGUAGE, MEMORY RECALL.
OPERATING TEMPERATURE			0°C TO 40°C
OPERATING HUMIDITY			10% TO 80%
NORDIC STANDARD			TCO 99
PLUG & PLAY			DDC 1/2B
POWER MANAGEMENT			DPMS (VESA) / NUTEK / E2000 / EPA

INPUT PIN ASSIGNMENT
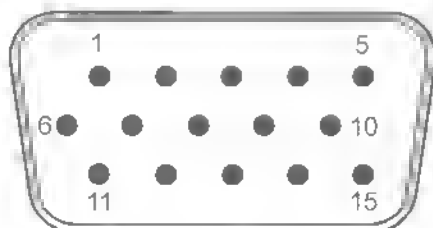
PIN   NO.   SIGNAL

PIN NO.	SIGNAL
1.	RED VIDEO
2.	GREEN VIDEO
3.	BLUE VIDEO
4.	GROUND
5.	GROUND
6.	RED VIDEO RETURN
7.	GREEN VIDEO RETURN
8.	BLUE VIDEO RETURN
9.	NO PIN
10.	GROUND
11.	GROUND
12.	SDA (DDC1/2B DATA)
13.	HORIZONTAL SYNC
14.	VERTICAL SYNC
15.	SCL (DDC 2B CLOCK)

SPECIFICATIONS

MODEL		F996 BYM
	SIZE	19 INCH DIAGONAL (18" VIEWABLE)
	DEFLECTION ANGLE	90 DEGREES
CRT	DOT PITCH	0.25mm
	SCREEN	DOT TYPE NON-GLARE
GRAPHICS STANDARDS COMPATIBILITY		NON-INTERLACED 1600 X 1200, 1280 X 1024, 1024 X 768, XGA, SUPER VGA, VGA.
RESOLUTION(MAX)		1600X1200 NON-INTERLACED
VIDEO BANDWIDTH (DOT RATE)		150MHz
SYNCHRONI -ZATION	HORIZONTAL	30~95KHz
	VERTICAL	50~180Hz
INPUT SIGNAL	VIDEO	RGB ANALOG 0.7VP-P/75 OHMS POSITIVE
	SYNC	TTL SEPARATE/COMPOSITE (+/-)
DISPLAY COLORS		UNLIMITED
DISPLAY AREA (H x V)		(RECOMMENDED) THE DISPLAY AREA DEPENDS ON ACTUAL SIGNAL TIMINGS
POWER SOURCE		90-264 VAC
POWER CONSUMPTION		130W (MAX)
INPUT CONNECTOR		15 PIN MINI D-SUB
DIMENSION		460mm (D) x 448mm (W) x 465mm(H) (USE STAND)
WEIGHT		N.W. : 20.0KG (44.1LBS) , G.W. : 22.8KG (50.3LBS)
USER CONTROLS		CONTRAST, BRIGHTNESS, H-POSITION, V-POSITION, H-SIZE, V-SIZE, PINCUSHION, PIN-BALANCE, TRAPEZOID, PARALLEL, TILT, TOP CORNER,BOTTOM CORNER, TOP PHASE HOOKING, BOTTOM PHASE HOOKING, H-MOIRE, V-MOIRE, DEGAUSS, OSD H-POSITION, OSD V-POSITION. COLOR, V-LINEARITY, V-S LINEARITY, LANGUAGE, MEMORY RECALL.
OPERATING TEMPERATURE		0°C TO 40°C
OPERATING HUMIDITY		10% TO 80%
NORDIC STANDARD		MPR II
PLUG & PLAY		DDC 1/2B
POWER MANAGEMENT		DPMS (VESA) / NUTEK / E2000 / EPA

POWER MANAGEMENT

THIS MONITOR CAN SUPPORT VESA AND NUTEK POWER
MANAGEMENT SYSTEMS, INDICATED BY THE LED ON THE
FRONT PANEL :

STATE	LED COLOR	POWER CONSUMPTION
ON	GREEN	130W (MAX)
STANDBY/ SUSPEND	YELLOW	< 15W
ACTIVE OFF	AMBER	< 3W

The monitor remains in the power-saving state until you press a key on
the keyboard or move the mouse (if available).

DISPLAY DATA CHANNEL (DDC)

COMMUNICATION CHANNEL TYPE: VESA DDC1/2B.

ESTABLISHED TIMINGS: AS PRESET TIMING CHARTS.

PRESET TIMING CHARTS

RESOLUTION	HOR.FREQ.	VERT. FREQ.	SYNC. POLARITY HOR. VERT.	
640 X 400	31.47KHZ	70 HZ	–	+
640 X 480	31.47KHZ	60 HZ	–	–
640 X 480	37.5KHZ	75 HZ	–	–
800 X 600	46.875KHZ	75 HZ	+	+
800 X 600	53.674KHZ	85 HZ	+	+
1024 X 768	48.363KHZ	60 HZ	–	–
1024 X 768	60.023KHZ	75 HZ	+	+
1024 X 768	68.677KHZ	85 HZ	+	+
1280 X 1024	79.976KHZ	75.025 HZ	+	+
1280 X 1024	91.146KHZ	85.024 HZ	+	+
1600 X 1200	93.75KHZ	75 HZ	+	+
MAC 832 X 624	49.714KHZ	74.532 HZ	–	–
MAC 1152 X 870	68.681KHZ	75 HZ	–	–